Albany Marine Corps Logistics Base
Albany, Georgia

Engineering Field Division/Activity:	SOUTHDIV
Major Claimant:	CMC
Size:	3,327 Acres
Funding to Date:	$22,764,000
Estimated Funding to Complete:	$71,971,000
Base Mission:	Acquires, maintains, repairs, rebuilds, distributes and stores supplies and equipment to sustain combat readiness of world wide Marine Corps forces; provides Quality Assurance Program, conducts training
Contaminants:	Heavy metals (arsenic), pesticides, phtyhalates, polynuclear aromatic hydrocarbons, volatile organic compounds (trichloroethylene)

Number of Sites:		**Relative Risk Ranking of Sites:**			
CERCLA:	24	**High:**	11	**Not Evaluated:**	1
RCRA Corrective Action:	5	**Medium:**	6	**Response Complete:**	2
RCRA UST:	0	**Low:**	9	**Total Sites:**	29
Total Sites:	29				

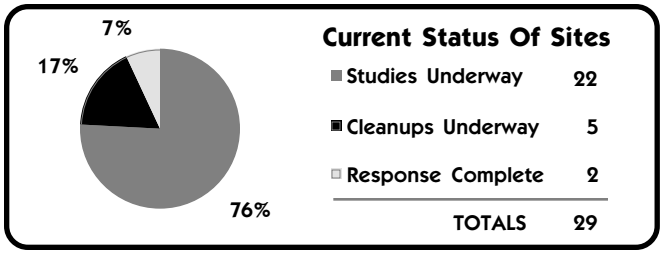
NPL

EXECUTIVE SUMMARY

The Albany Marine Corps Logistics Base (MCLB) is located in the northwestern portion of Georgia, about midway between Tallahassee, Florida and Macon, Georgia. The Marine base was commissioned as the Marine Corps Depot of Supplies in 1952. In 1954, a large maintenance facility was completed on the base and began functioning as a Marine Corps Maintenance Activity. In 1976, additional functions to support the Marine Corps weapons systems and equipment were moved to the base and the name was changed to the Marine Corps Logistics Base. The typical operations associated with equipment and weapons maintenance and support have contributed to the contamination on the base. Primary site types include disposal areas, storage areas, and landfills. Primary contaminants of concern are the organic solvent TCE, the chemical additive PCB and heavy metals. Current operations include pollution prevention technologies to prevent further contamination. The driving force for placing the Albany MCLB Marine Base on the National Priorities List (NPL) in December 1989, was a potential for contaminated groundwater to migrate into off-base drinking water wells. A Federal Facility Agreement (FFA) was signed between the EPA Region IV, Georgia Environmental Protection Department and the Navy in 1991.

The primary pathway for contaminant migration on the base is groundwater movement through the surficial aquifer. If contamination were to leak from the surficial aquifer into one of the deeper aquifers, there is a potential off-base impact. On the Marine base there are both a wildlife preserve and a fishing lake, Indian Lake, where runoff from the base may carry contamination. The potential off-base impacts from sources of contamination on the MCLB property are primarily associated with the drainage ditches, which could carry contaminants off-base and into the Flint River. Hunters and fishermen are the main human receptors in the wildlife preserve, lake and river areas.

The Albany MCLB Technical Review Committee (TRC) was established in September 1989. There has been very little community attendance at these meetings. The TRC has not been converted to a Restoration Advisory Board (RAB) since public interest has not been sufficient to do so. The Community Relations Plan (CRP) was finalized in December 1991.



The Installation Restoration Program (IRP) investigations were started at Albany MCLB in FY84. The Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), was completed for 18 CERCLA sites in FY85. Site Inspections (SIs) were completed in FY87 for 12 of the sites. One additional CERCLA site was added in FY91 after completing a PA, another site was added in FY87 following the SI phase and four sites were added during the Remedial Investigation/Feasibility Study (RI/FS) phase. There are now a total of 24 CERCLA sites at Albany. RI/FSs have been completed for three sites, two in FY92 and one in FY94. RI/FS phases for ten other sites are underway and will be completed in FY96 and FY97. The remaining sites will have an RI/FS, Remedial Design (RD) phase and Remedial Action (RA) phase running fairly concurrently. All are scheduled to begin no later than FY03 and be completed by FY05.

In addition to the 24 CERCLA sites, there are five RCRA Corrective Action sites, Solid Waste Management Units (SWMUs), at Albany MCLB. One SWMU was established and listed Response Complete (RC) in FY89, following a Corrective Measures Study (CMS), equivalent to an RI/FS. Three other SWMUs have started a CMS, one was completed in FY94, the other two will be complete in FY97. Corrective Measures Implementation (CMI), equivalent to RA, have started for the four SWMUs; one was completed in FY94, two will be complete FY96 and the final SWMU will complete CMI in FY02.

There have been a variety of successful accomplishments at Albany MCLB. For reduction of risk at Site 3 where there was a possibility that a plume of the organic solvent TCE was migrating off-base, a pump and treat system was put in place to contain the plume and stop migration. A big accomplishment in terms of time savings has been the use of an Electronic logbook to enable the success of a “paperless project”.

Making use of innovative technologies, a pilot Scale Treatment System has been designed for Site 1 and was scheduled to begin November 1995. This system involves treating groundwater contaminated with the organic solvent TCE and its breakdown products with (1) a peroxone oxidation treatment system; (2) methano tropic rotating biological contactor and (3) in-situ anaerobic bioremediation.

In an effort to accelerate the cleanup, the Site Management Plan (SMP) schedule has been expedited in order to reduce the time spent in the study phase of the cleanup projects; study phases (Preliminary Assessment/Site Inspection (PA/SI), RI/FS and RD) are overlapped whenever possible.

ALBANY MCLB
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - There are two surface bodies of water on the Albany MCLB; Covella Pond and Indian Lake. Covella Pond is located in the central, administrative area of the base. The pond is filled with water from the base potable water supply system. Indian Lake is located at the northeast portion of the base and is surrounded by 40 acres of wetlands. There are also two significant bodies of water located near the base. They are the Flint River, located approximately three miles west of the base, and Piney Woods Creek, which drains the northeast corner of the base. In general, surface drainage for the western portion of Albany MCLB drains through a system of culverts and grass ditches to the west, eventually into the Flint River which eventually discharges into Lake Seminole, at the Florida-Georgia border. The eastern portion of the base drains into Indian Lake.

There are three levels of groundwater aquifers affected by the base; an upper, surficial aquifer; the middle, the Ocala aquifer and the deepest, the Floridan aquifer, which is the main source of drinking water for the area. The primary pathway for contaminant migration on the base is groundwater movement through the surficial aquifer. If contamination were to leak from the surficial aquifer or the Ocala aquifer into the Floridan aquifer, there is a potential off-base impact.

NATURAL RESOURCES - On the Marine base, there are both a wildlife preserve and a fishing lake, Indian Lake, where runoff from the base may carry contamination. The potential off-base impacts from sources of contamination on the MCLB property are primarily associated with the drainage ditches, which could carry contaminants off-base and into the Flint River. Although the Flint River is not a source of potable water for the area, it is classified by the State of Georgia for fishing, propagation of fish, shellfish and game. Aquatic life, which inhabit the lake and river, and wildlife, which live nearby, could be impacted by the contamination. Hunters and fishermen are the main human receptors in the wildlife preserve, lake and river areas. Contaminants entering the surficial aquifer would not directly impact the on-base wells, however, off-base migration could contaminate shallow wells in the area. Contaminants in the surficial aquifer, which drain from the base, could also migrate to the underlying Ocala aquifer and the Floridan aquifer, the local source for potable water. Because of this hazard, the Navy has had local inhabitants placed on local potable water systems and taken off private wells in the area.

Of the 26 species of animals that the State of Georgia has placed on the endangered or threatened list, there are nine which have the potential to inhabit Albany MCLB. They are the Georgia blind cave salamander, American alligator, eastern indigo snake, ivory-billed woodpecker, peregrine falcon, bald eagle, wood stork, red-cockaded woodpecker and Bachman's warbler. There is also a potential for ten endangered or threatened plant species to be on or near the base.

RISK - Human Health Risk Assessments (HHRAs) and Ecological Risk Assessments (ERAs) have been performed at several sites. At Operable Unit (OU) 1 (Sites 1-3) it was found that health risks for future residents are at higher than acceptable levels. In response to those findings, remedial goal options for groundwater were developed, including further groundwater investigation, and a removal action was scheduled at Site 3 for removal and disposal of sludge. The findings for the HHRA at Site 11 showed there are no significant health risks for exposure to any media and at Site 26 there were no significant health risks for exposure to soil or subsurface soil at the site, but there would be further investigation into groundwater. The overall results of the HHRA at OU 4 (Sites 10, 12. 13 and 22) indicate that current and future land-use cancer and non-cancer risks at all sites are below the level of concern. The results of an ERA at Site 6 indicated that terrestrial receptors are not likely to be at risk from the organic or inorganic analytes that were detected.

The Navy completed a Relative Risk Ranking for the installation in FY95. Eleven of the 29 sites at the installation received a "high" risk ranking. The greatest problem was with groundwater. Nine of the eleven high ranking sites received the high score for the media groundwater. Seven of those sites had evidence of a migration pathway to the groundwater with a potential for human receptors. The groundwater of the base discharge into the recreational waters of Indian Lake, Ocala aquifer and the Flint River. The fish and animals and the fishermen and hunters of the area are potential receptors. There was a contaminated plume under the Industrial Wastewater Treatment Plant (IWTP) that affected the groundwater of three sites (Sites 10, 12 and 13). Several of the other high ranked sites were landfill and disposal sites. One site (Site 8, Grit Disposal Area) was ranked high for the media sediment. Evidence of contamination with the chemical additive PCB was found on the site.

The Agency for Toxic Substance and Disease Register (ATSDR) performed a public health assessment and released the initial assessment report in September 1992. Among ATSDR's recommendations was groundwater in certain private wells near the MCLB be sampled. Residents of a nearby road were connected to the City of Albany's water supply and are no longer exposed to the contaminated groundwater.

RESTORATION PROJECTS - After site cleanup of Sites 16 and 17, the land was reseeded with grass.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - Albany MCLB was placed on the National Priorities List (NPL) on 21 November 1989, with a Hazard Ranking System (HRS) score of 44.65. The driving force for placing Albany on the NPL was a potential for contaminated groundwater to migrate into off-base drinking water wells. Based on a RCRA investigation of Site 12 (IWTP area), it was suspected that contamination was entering the groundwater and had a potential to migrate off-base.

LEGAL AGREEMENTS - A Federal Facility Agreement (FFA) was signed between the EPA Region IV, Georgia Environmental Protection Department and the Marine Corps in 1991. The FFA identified 13 Potential Sources of Contamination (PSC) which required a Remedial Investigation/Feasibility Study (RI/FS) and 11 PSCs which required further screening.

PARTNERING - An informal partnering agreement for cooperative effort in expediting document review is already in place. A formal partnering agreement between the Marine Corps and state and federal regulators should be in place in FY96. One effect of the partnering has been to speed up the entire process. Each party has agreed to quickly review and give a response and turn-around to the many documents that are required for a cleanup project.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - The Albany MCLB Technical Review Committee (TRC) was established in September 1989. It meets regularly twice a year, with additional public meetings as needed. To date, there has been very little community attendance at these meetings. The membership of the TRC consists of representatives from the local utility company, the Marine Corps Public Works Office, Darton College, Georgia Environmental Protection Department, EPA region IV, U.S. Department of Commerce and U.S. Department of Fish and Wildlife. The TRC will not be converted to a Restoration Advisory Board (RAB) since Marine Corps installations initiate the formation of a RAB only upon sufficient community interest.

COMMUNITY RELATIONS PLAN - The Community Relations Plan (CRP) was finalized in December 1991.

INFORMATION REPOSITORY - The Information Repository is in the Dougherty County Library in Albany, Georgia. The Administrative Record is stored on the Marine base.

ALBANY MCLB
HISTORICAL PROGRESS

FY85

Sites 1-9, 11, 15, 18-22, 25 and 26 - Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA) was completed for 18 CERCLA sites.

FY87

Sites 1-3, 5-7, 9-11, 22, 25 and 26 - Site Inspection (SI) was completed at 12 CERCLA sites.
Site 12 - The Navy began cleanup activities at the Industrial Waste Treatment Plant (IWTP) on the installation by implementing a groundwater recovery system and quarterly groundwater monitoring program.

FY89

SWMU 1 - Corrective Measures Study (CMS) was completed at RCRA site Solid Waste Management Unit (SWMU) 1.
SWMU 2 - Corrective Measures Implementation (CMI) was started, an Interim Remedial Action (IRA) was completed that consisted of capping of the IWTP sludge beds, and an additional IRA for soil removal and groundwater treatment for RCRA site, SWMU 2 was started.
All Sites - RCRA Facility Investigation (RFI) activities were completed.

FY90

Site 14 - An administrative order was issued by the state of Georgia for the RCRA closure for the Domestic Wastewater Treatment Plant (DWTP) sludge beds. Sampling results indicated heavy metal concentrations remaining from decontamination activities. Closure included the removal of sand and gravel from the sludge beds.

FY91

Site 3 - An Interim Record of Decision (IROD) was completed for Site 3 (Long-term landfill) for a pump and treat action for removal of the organic solvent TCE.
Site 14 - A PA was performed.
Sites 16 and 17 - An IROD was signed for Site 16 (Building 7100 area with PCB contamination) and Site 17 (Depot maintenance activity area with chrome contamination) for soil removal and capping.

FY92

Sites 2, 3 and 11 - A Remedial Investigation/Feasibility Study (RI/FS) started for three sites.
Site 3 - The remediation specified in the IROD was completed.
Sites 3, 16 and 17 - Two Records of Decision (RODs) for these sites were signed in August 1992. One for Site 3, the other for Site 16 and 17.
Sites 16 and 17 - The Remedial Investigation and Feasibility Study (RI/FS) was completed at two sites.

FY93

Sites 6, 8, 10, 12-14 and 22 - An RI/FS was started for seven sites.
Sites 16 and 17 - A Baseline Risk Assessment and Remedial Design (RD) was completed.
SWMUs 4 and 5 - CMS was started at two RCRA sites.

FY94

OU 1 - An IROD for Interim Corrective Measure (ICM) at Operable Unit (OU) 1 was signed in September 1994.
OU 4 - An Engineering Evaluation and Cost Analysis (EE/CA) was completed for sites at OU 4.
Site 1 - An RI/FS was completed.
Sites 1-3 - Treatability studies were initiated for sites in OU 1.
Sites 1-3, 8, 11 and 14 - A Baseline Risk Assessment was completed for six sites; in OU 1 (Sites 1-3), OU 2 (Site 11) and OU 5 (Sites 8 and 14).
Site 14 - Began CMI activities by removing the top eight inches of the DWTP sludge beds.
Sites 16 and 17 - Remediation completed in January 1994 and Remedial Action (RA) phase and three IRAs started.
Site 26 - An RI/FS was started.
SWMU 3 - CMS, CMI and a Final Remedial Action (FRA) for soil removal from domestic sludge drying beds were completed at RCRA site, SWMU 3.

PROGRESS DURING FISCAL YEAR 1995

FY95

All Sites - As part of an initiative to implement new technology, electronic logbook computers are being evaluated for their ability to improve accuracy and speed of data collection and report production.
OU 1 - Superfund innovative technology programs, including groundwater extraction and air stripping treatment system, were initiated.
OU 5 and Site 3 - An IROD for sites in OU 5 was signed and called for an IRA. This IRA and one for Site 3 called for "pump and treat" systems to contain a plume of the organic solvent TCE which had the possibility of migrating off-base.
Sites 6, 10, 12, 13 and 22 - A Baseline Risk Assessment and a Draft Remedial Investigation (RI) were completed for sites in OU 4.
Site 8 - A ROD was signed for removal of contaminated soil with the chemical additive PCB.
SWMUs 4 and 5 - CMI started at two RCRA sites.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

All Sites - A No Further Action (NFA) ROD on all media, except groundwater will be signed. Groundwater will be evaluated for remediation as a distinct OU, scheduled for completion in FY98. The RFI and CMI reports are expected to be completed, with groundwater monitoring anticipated to continue until FY00.
OU 1, 2 and 4 -A ROD is anticipated for all media at OU 1, except groundwater. An NFA ROD is expected for OU 2. Two sites in OU 4 are scheduled for a ROD for soil and waste removal.
Site 1 - Potential Source of Contamination (PSC) will be the site of a pilot scale treatment system to be installed, using methanotropic rotating biological contactor and anaerobic bioremediation for treatment of the organic solvent TCE. The pilot scale treatment system to start November 1995 and end January 1996.
Sites 2, 3, 6, 10-13, 22 and 26 - RI/FS phase will be completed for nine sites.
Site 3 - Soil removal will begin.
Sites 4, 5 and 7 - An RI/FS will start for three sites.
Sites 16 and 17 - The RA phase is expected to be completed for two sites.
Site 8 - IRA for removal of soil contaminated with the chemical additive PCB will be completed.
Site 14 - There is an Administrative Order by the State of Georgia for closure of Site 14 (Domestic wastewater sludge drying beds). Following the RD phase, scheduled for FY96, there should be No Further Response Action Planned (NFRAP) for Site 14 for all media, except groundwater.
Site 22 - Removal action to begin for treatment of groundwater contaminated with the organic solvent TCE.
SWMUs 4 and 5 - CMI to be completed at two RCRA sites.

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FY97

All Sites - A ROD concerning groundwater for all sites to be signed. All RI/FS activities at the remaining sites to be completed in FY97; Remedial Designs (RDs) are expected to be completed in FY98 and Remedial Actions (RAs) for the remaining sites are expected to be completed between FY97 and FY02.
Sites 1, 3 and 26 - RD will be complete at three sites.
Sites 1, 3 and 11 - RA phase will start at three sites.
Sites 4, 5, 7, 8 and 14 - RI/FS will be completed for five sites.
Sites 4, 6, 12, 13, 18, 19 and 22 - RD will start at seven sites.
Site 26 - An FRA of groundwater treatment will be completed.

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	19							
SI	12							
RI/FS	3		9	5				7
RD	2			3	7			12
RA			2		3		3	16
IRA			1(1)					
RC			2		2		3	17
Cumulative Response Complete			8%		17%		29%	100%
RCRA CA	**FY94 and before**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01 and after**
RFA								
RFI								
CMS	2			2				
DES								
CMI	1		2					1
IRA	1(2)							1(1)
RC	2			2				1
Cumulative Response Complete	40%			80%				100%